

BIRDS COLLECTED BY DR. W. L. ABBOTT ON VARIOUS
ISLANDS IN THE JAVA SEA.

By HARRY C. OBERHOLSER,

Of the Biological Survey, United States Department of Agriculture.

The present paper contains the ornithological results of Dr. W. L. Abbott's visits to four islands in the Java Sea.

The writer has to thank Doctor Abbott for most of the physiographic facts concerning these islands; and Dr. Charles W. Richmond, assistant curator of birds in the United States National Museum, for other help.

The measurements used are all given in millimeters, and have been taken as in the author's article on *Butorides virescens*.¹ The names of colors are based on Mr. R. Ridgway's Color Standards and Color Nomenclature.

I. SOLOMBO BESAR ISLAND.

Solombo Besar Island, Solombo Island, or Masolombo Besar, as it is variously called, is situated in the eastern part of the Java Sea. It lies about 90 miles south of Borneo, about 145 miles north of the nearest point of the eastern end of Java, and some 120 miles east of Bawean Island. It is approximately 2 by 4 miles in extent, is of volcanic origin, though now surrounded by a coral reef, and has a low but rather uneven contour, which culminates in a hill some 250 feet in height. The soil is fertile and is extensively cultivated by the resident population. Nearly all the heavy forest has been cleared, and the chief remaining portion is to be found on and about the hill already mentioned. The principal native mammals are rats and flying foxes; and there are also many cattle running wild. Birds in 1907 were abundant and tame, though apparently of few species.

Dr. W. L. Abbott visited this island from December 3 to 6, 1907, and during this time collected 33 specimens of birds, which he sent to the United States National Museum. These represent 10 species, 8 of which are hereinafter described as new forms. One of these new birds belongs to an apparently undescribed endemic genus. Also a species of megapode was found on the island but not obtained.

¹ Proc. U. S. Nat. Mus., vol. 42, 1912, p. 533.

No birds have heretofore been reported from Solombo Besar, and Doctor Abbott's brief stay probably has not nearly exhausted its ornithological possibilities. Judging from the admittedly inadequate basis offered by the few species of birds catalogued below, this island appears to be faunally more closely related to Java and Timor than to Borneo.

Family FALCONIDAE.

CERCHNEIS MOLUCCENSIS MICROBALIA, new subspecies.

Subspecific characters.—Similar to *Cerchneis moluccensis occidentalis*, from Celebes, but with the blackish brown spots and bars of back, scapulars, and upper surface of wings decidedly smaller; blackish streaks on pileum somewhat narrower; and blackish markings of lower surface smaller.

Description.—Type, adult male, No. 181449, U.S.N.M.; Solombo Besar Island, Java Sea, March 12, 1907; Dr. W. L. Abbott. Upper surface auburn, rather lighter on rump and pileum, the latter narrowly streaked with black, the cervix, back, and rump with subtriangular spots or bars of black, these most numerous on cervix, largest on the back and smallest on the rump; upper tail-coverts neutral gray, the tips more or less washed with auburn; tail light neutral gray above, with a broad band of black near its end, and a rather wide tip of partly grayish, partly whitish, light-pinkish cinnamon; tail below similar; but paler; wing-quills fuscous black, the outer webs, excepting the outermost two primaries, conspicuously spotted basally with auburn, the inner webs barred with the same color, which, on the inner edge of the feathers, passes into white, the amount of auburn decreasing toward the outer quills until on the outermost the bars are nearly all white; primary coverts with alternating broad bars of fuscous black and auburn; remaining wing-coverts auburn, with subtriangular spots or narrow bars of black; subocular region pale grayish, finely streaked with black; lower parts cinnamon, rather duller anteriorly, the jugulum and sides of throat heavily streaked with fuscous black, the breast and upper abdomen thickly strewn with roundish or subtriangular spots of fuscous black, the thighs and crissum immaculate; lower wing-coverts white, barred, spotted, and streaked, but rather sparingly, with black and neutral gray; axillars white, but much tinged with auburn and heavily barred with fuscous black and neutral gray; "feet yellow." Total length,¹ 338 mm.; wing, 230; tail, 152; exposed culmen, 19.5; culmen from cere, 15; tarsus, 42.5; middle toe without claw, 29.5.

This bird represents an apparently well-characterized race, with which the birds from Flores and Timorlaut, mentioned by Meyer

¹ Measured in the flesh by the collector.

and Wigglesworth,¹ as well as those from other of the Sunda Islands, are probably identical. It differs from *Cerchneis moluccensis moluccensis* and *Cerchneis moluccensis orientalis* in paler under surface and cheeks, more purely whitish under wing-coverts, and additionally as from *Cerchneis moluccensis occidentalis*.² The specimen obtained by Doctor Abbott, taken on December 3, 1907, is molting a few of its contour feathers, but neither remiges nor rectrices.

With the present addition there are now four subspecies of *Cerchneis moluccensis moluccensis*, the names and geographic ranges of which are as follows:

Cerchneis moluccensis moluccensis (Jacquinot and Pucheran).—Moluccan islands of Goram, Ceram, Amboina, Buru, Peling, and doubtless other intervening and adjacent islands.

Cerchneis moluccensis orientalis (Meyer and Wigglesworth).—Moluccan islands of Gilolo (Halmahera), Morotai, Ternate, Tidore, Mareh, Batchian, and probably neighboring islands.

Cerchneis moluccensis occidentalis (Meyer and Wigglesworth).—Celebes and Borneo.

Cerchneis moluccensis microbalia Oberholser.—West to Java; south to Lombok, Sumba, Flores, Letti, and Timor; east to Timorlaut; and north to Solombo Besar Island.

Family MEGAPODIIDAE.

MEGAPODIUS DUPERRYII GOULDII Gray.

Megapodius gouldii GRAY, Proc. Zool. Soc. Lond., 1861, p. 290 (Lombok Island, East Indies).

Doctor Abbott obtained no specimens of this bird, but found unmistakable evidences of the occurrence of megapodes, doubtless this species, on the island. This record is interesting as marking the extreme western limit of the recorded range of this species.

Family CHARADRIIDAE.

PLUVIALIS DOMINICA FULVA (Gmelin).

[*Charadrius*] *fulvus* GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 687 (Tahiti Island, Society Islands).

One immature female, taken, December 5, 1907. Length (in flesh), 253 mm

Family TRERONIDAE.

MUSCADIVORES ROSACEUS ZAMYDRUS, new subspecies.

Subspecific characters.—Similar to *Muscadivores rosaceus rosaceus*, from the island of Timor, but decidedly darker above, with the me-

¹ Birds Celebes, vol. 1, 1898, p. 80.

² See p. 178.

tallic sheen on interscapular region and posterior parts more evident (less overlaid with gray).

Description.—Type, adult male, No. 181434, U.S.N.M.; Solombo Besar Island, Java Sea, December 6, 1907; Dr. W. L. Abbott. Top and sides of head light grayish vinaceous, paling somewhat on lores and forehead; an incomplete orbital ring whitish; hind neck between light neutral gray and pale neutral gray; back and scapulars metallic dull Indian purple, in places rather dull metallic leaf green, both colors more or less overlaid and dulled by grayish, least so posteriorly; lower back and rump neutral gray, deepening on the shorter upper tail-coverts, and with a sheen of metallic dull Indian purple, this most conspicuous on the upper tail-coverts, where slightly mixed with dull metallic green; longest upper tail-coverts metallic leaf green, with a decided metallic purplish bronze tinge, particularly on the margins of the feathers; rectrices metallic dark dull yellow green, becoming more bronzy marginally, and more bluish medially, especially on terminal portion of some of the feathers; basal and outer portions of inner webs of wing-quills fuscous black, shading on inner margins of primaries and secondaries to fuscous; primaries and secondaries glaucous greenish slate gray on the outer webs, and greenish slate or greenish slate black on the inner and terminal portions of the inner webs, the outer vanes and tips of inner secondaries and tertials becoming more metallic leaf greenish, the tertials with also a tinge of dull Indian purple; primary coverts metallic dusky yellowish green; remaining upper wing-coverts dull metallic leaf green, mixed with dull Indian purple, greenish slate, and greenish slate gray; chin pale pinkish buff, shading into the pale brownish drab of middle of throat; sides of neck anteriorly between light and pale neutral gray, shading posteriorly into pale vinaceous drab; jugulum, breast, and abdomen, pale vinaceous drab; sides and flanks light neutral gray, the latter much washed with pale vinaceous drab; under tail-coverts kaiser brown; lining of wing pale neutral gray.

A fine series of 10 adults shows that this big pigeon from Solombo Besar Island is an easily recognizable subspecies, and apparently hitherto undescribed. The birds of this series exhibit some individual variations, but as a whole are fairly uniform in characters. They vary individually, for the most part, in the metallic color of the upper surface, which in some examples is decidedly purplish, in others green; in the depth of the gray color of nape, and in the color of the lower surface, which in some is much more pinkish than in others, this due, probably at least in part, to adventitious stain. The colors of the soft parts in life are given on the label of a male (No. 181435, U.S.N.M.) as follows: "Iris deep red; eyelids red; bill leaden; cere red purple; feet purple red." None of the specimens show any indications of

molt in the wing-quills, and only one (No. 181432, U.S.N.M., December 4, 1907) in the rectrices. Four others (No. 181431, U.S.N.M., December 5, 1907; No. 181434, U.S.N.M., December 6, 1907; No. 181435, U.S.N.M., December 4, 1907; and No. 181436, U.S.N.M., December 3, 1907) have a few pin-feathers on the hind neck, and all but one bird also on the foreneck.

Detailed measurements of all these specimens are as follows:

Measurements of specimens of Muscadivores rosaceus zamydrus.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ¹	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe with-out claw.
181436.....	Male.....	Solombo Besar Island, Java Sea.	1907, Dec. 3	Dr. W. L. Abbott.	mm. 420	mm. 233	mm. 150	mm. 20.5	mm. 39	mm. 36.5
181432.....	do.....	do.....	Dec. 4	do.....	420	238	154.5	22.5	32	37
181435.....	do.....	do.....	do.....	do.....	415	235	150	19	31	37
181437.....	do.....	do.....	do.....	do.....	419	239	155	19.5	30	33.5
181439.....	do.....	do.....	do.....	do.....	425	242	152.5	21	30.5	33.5
181431.....	do.....	do.....	Dec. 5	do.....	406	228	147.5	18.5	31	35
181433.....	do.....	do.....	do.....	do.....	396	230	144.5	20	31.5	37
181438.....	do.....	do.....	Dec. 6	do.....	422	230	152.5	19.5	32.5	34.5
181434.....	do.....	do. ²	do.....	do.....	415	227	152.5	21.5	30	35
Av. age of 9 males.....					413.4	233.6	151	20.2	30.9	35.4
181440.....	Female.	Solombo Besar Island, Java Sea.	Dec. 3	Dr. W. L. Abbott.	405	208	143	19	31	35

¹ Measured in the flesh by the collector.

² Type.

Family KAKATOIDAE.

KAKATOE PARVULUS ABBOTTI, new subspecies.³

Subspecific characters.—In color like *Kakatoe parvulus parvulus*, from the island of Timor, but decidedly larger.

Description.—Type, adult male, No. 181453, U.S.N.M.; Solombo Besar Island, Java Sea, December 4, 1907; Dr. W. L. Abbott. Entire plumage cream white, excepting the long recurved feathers of crest, which are picric yellow; the basal portion of inner webs of wing-quills, and the greater part of the inner webs of the rectrices, which are martins yellow; and the auriculars, which are slightly tinged with the same yellow; “bill and cere black.”

This new cockatoo is interesting as marking a new western limit for the genus. Doctor Abbott reported it in hundreds on Solombo Besar. He obtained eight specimens, all adults in full plumage, though somewhat soiled. The principal individual variation consists in the depth and extent of the yellow on the rectrices. Doctor Abbott records the color of the iris as red, and of the bare skin about the eyes as bluish white. Measurements of all the specimens follow.

³ Named for Dr. W. L. Abbott.

Measurements of specimens of *Kakatoe parvulus abbotti*.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ¹	Wing.	Tail.	Exposed cul- men.	Culmen from cere.	Tarsus.	Middle toe with- out claw.
					mm.	mm.	mm.	mm.	mm.	mm.	
181453.....	Male.....	Solombo Besar Island, Java Sea. ²	1907. Dec. 4	Dr. W. L. Ab- bott.	420	264	134	37	55	25	34.5
181455.....	do.....	do.....	Dec. 5	do.....	415	265	137.5	39.5	38	25	37
181451.....	Male?.....	do.....	Dec. 3	do.....	395	267	136	36.5	35	23	31
181454.....	do.....	do.....	Dec. 4	do.....	410	262	133	36	34	25.5	33.5
Average of 4 males.....					410	264.5	135.1	37.3	35.5	24.6	34.0
181456.....	Female.....	Solombo Besar Island, Java Sea.	Dec. 3	Dr. W. L. Ab- bott.	405	256	134	37	35	24	33
181457.....	do.....	do.....	Dec. 6	do.....	418	261	139	35	33	23	34.5
181452.....	"Male?" [= Female]	do.....	Dec. 4	do.....	412	256	126	36.5	35	26	34.5
181458.....	Female?.....	do.....	Dec. 6	do.....	421	253	146	34.8	33	26.5	33
Average of 4 females.....					414	256.5	136.2	35.8	34	24.9	33.8

¹ Measured in the flesh by the collector.² Type.

Family ALCEDINIDAE.

SAUROPATIS CHLORIS CYANESCENS Oberholser.

Sauropatis chloris cyanescens OBERHOLSER, Proc. U. S. Nat. Mus., vol. 52, February 8, 1917, p. 189 (Pulo Taya, off the southeastern coast of Sumatra).

One adult male, No. 181492, U.S.N.M., taken, December 4, 1907.

This does not differ from Bawean Island birds. It is in worn plumage, and shows evidence of molt among the contour feathers and rectrices. It measures: Total length (in flesh), 263 mm.; wing, 110; tail, 71.5; exposed culmen, 48; tarsus, 16.

Family CAMPEPHAGIDAE.

PERISSOLALAGE, new genus.³

Generic characters.—Similar to *Lalage* Boie, but bill, in both vertical and horizontal aspects, longer and relatively more slender (more turdine); culmen less conspicuously curved, and more sharply ridged; tail decidedly longer; lower tail-coverts much shorter, covering only about basal one-third of rectrices; spurious (first) primary relatively as well as actually much shorter and narrower; third and fourth (counting from outermost) primaries longest, the second shorter, equal to the fifth and very much longer than the sixth.

Type.—*Perissolalage chalepa*, new species.

PERISSOLALAGE CHALEPA, new species.

Specific characters.—Female similar to same sex of *Lalage nigra* (=terat), but the terminal portion of tail-feathers more extensively white; the lesser wing-coverts conspicuously edged with cinnamon-

³ From *περισσός*, mirabilis; and *Lalage* (λαλαγή, loquacitas).

ous; all the other wing edgings more or less strongly tinged with buffy or cinnamomeous instead of being pure white; superciliary stripe narrower and shorter, posteriorly not reaching beyond the auriculars; entire upper surface strongly rufescent brown instead of grayish brown; and even wings and tail more rufescent.

Description.—Type, adult female, No. 181577, U.S.N.M.; Solombo Besar Island, Java Sea, December 4, 1907; Dr. W. L. Abbott. Forehead brussels brown; crown between brussels brown and clove brown; both forehead and crown with rather broad shaft streaks of fuscous black, the crown slightly streaked with buffy whitish, its ground color passing posteriorly into the light olive brown of the back; back and scapulars between olive brown and buffy brown, with narrow, barely discernible, dark clove brown shaft streaks; rump smoke gray with paler terminal bars; upper tail-coverts smoke gray with paler tips, the longest feathers darker, more brownish, with hair brown subterminal bars and grayish white tips; tail fuscous, the two middle feathers narrowly margined on both webs with brownish white, the remaining rectrices with large terminal white areas, these longest on the outer web, and increasing progressively to the outermost pair, which has about one-third of the inner web and two-thirds of the outer web white; wings fuscous, but the whole basal portion of the inner vanes of wing-quills white, this occupying two-thirds or more of the length of each feather on the inner primaries and outer secondaries; quills narrowly margined on exterior webs with creamy white or light buff, this broadest and most buffy on terminal portion of secondaries and tertials; primary coverts narrowly tipped with buffy white; greater wing-coverts narrowly edged and more broadly tipped with the same; median coverts very broadly margined on both sides with light pinkish cinnamon or whitish; lesser coverts also edged broadly on both vanes with whitish, pinkish cinnamon, and cinnamon, leaving, as on the median coverts, only a pointed central area of fuscous; lores olive brown, but much mixed with white; broad postocular stripe brown like the crown; superciliary stripe, sides of head and neck, and entire lower surface, including lining of wings, creamy white, more definitely tinged with cream color on the breast, sides of neck and of body; the flanks, sides of breast and of body somewhat obscurely and irregularly barred with pale mouse gray; thighs mixed light mouse gray, light drab, and dull white; bill (in skin) fuscous, the tip darker, the basal portion of mandible pale brownish. Total length (in flesh),¹ 192 mm.; wing, 90; tail, 81; exposed culmen, 15.5; tarsus, 23; middle toe without claw, 14.5.

Of this remarkably distinct bird Doctor Abbott obtained but a single example, an adult female. It is in process of molting some of the contour feathers, but wing-quills and rectrices seem to be intact. The characters it exhibits preclude its reference to any genus hitherto described.

¹ Measured by the collector.

The adult male will of course prove to be probably a bird of black, white, and gray plumage like the males of the species in the genus *Lalage*.

Family DICRUROIDAE.

DICRUOPSIS PECTORALIS SOLOMBENSIS, new subspecies.

Subspecific characters.—Similar to *Dicruopsis pectoralis leucops* from Celebes, but smaller; iris light yellow (adult) or pale brownish gray (immature); hair-like plumes of forehead longer; back duller, less bluish or purplish black; hackles on sides of neck longer and somewhat less purplish (more greenish); posterior lower parts duller, more brownish (less velvety), black, with a less bluish (more greenish) sheen; metallic spots on feathers of throat and breast decidedly more greenish (less bluish).

Description.—Type, adult female, No. 181512, U.S.N.M.; Solombo Besar Island, Java Sea, December 4, 1907; Dr. W. L. Abbott. Upper surface velvety black, with a slight bluish green sheen, the feathers of pileum and some pointed feathers on cervix, shining metallic bluish slate black, and the upper tail-coverts shining metallic dusky yellowish green; tail black, more or less edged with shining metallic dusky yellowish green on exterior vanes of rectrices; wings black, becoming somewhat brownish on tips of primaries and inner margins of all the quills; the exposed portions of all the superior wing-coverts, the tertials, outer webs of secondaries, and outer webs of primaries except distal portion, shining metallic dusky yellowish green; sides of head and neck velvety black, the long pointed feathers of the latter shining metallic dull dusky bluish green; lower surface brownish black, the feathers of lower throat, jugulum, and upper breast with short lanceolate tips of shining metallic dusky dull green, giving to these parts a spotted appearance; lining of wing black, with a greenish or bluish metallic sheen, and a few of the under wing-coverts tipped with white; "iris pale straw yellow."

This race is apparently more nearly like *Dicruopsis pectoralis borneensis* (Sharpe) than like either *Dicruopsis pectoralis pectoralis* or *Dicruopsis pectoralis leucops*, but it differs in its duller, less velvety upper and lower parts, longer and more bluish neck hackles, and possibly also in the color of the iris.

Of the five examples obtained by Doctor Abbott, two, Nos. 181512 and 181515, U.S.N.M., are adults. The three others are somewhat immature, though fully grown, and differ from the adults in still more brownish black posterior surface and duller dorsum. None of the five seem to be in process of molt. The color of the bill and feet is given by the collector as black; of the iris in adult birds as pale yellow or straw yellow, in immature individuals pale brownish gray.

Both *Dicruopsis borneensis* (Sharpe)¹ and *Dicruopsis leucops* (Wallace)² seem without doubt to be but subspecies of *Dicruopsis*

¹ *Chibia borneensis* Sharpe, Proc. Zool. Soc. Lond., 1879, p. 246 (Mount Kina Balu, Borneo).

² *Dicrurus leucops* Wallace, Proc. Zool. Soc. Lond., 1865, p. 478 (Celebes).

pectoralis. Also, *Chibia hottentotta* appears to be generically distinct from the other members of the group, as contended by some recent authors. It has a relatively more slender bill, much longer hair-like frontal plumes, and different wing-formula, the second primary (counting from the outermost) being decidedly longer than the eighth, instead of equal or shorter. As *Chibia hottentotta* is the type of *Chibia* Hodgson, the remaining species will take the generic name *Dicruopsis* Salvadori.¹

Measurements of the series of the present new subspecies are as follows:

Measurements of specimens of Dicruopsis pectoralis solombensis.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ²	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe with- out claw.
181513.....	Male im- mature.	Solombo Besar Island, Java Sea.	1907. Dec. 4	Dr. W. L. Ab- bott.	<i>mm.</i> 303	<i>mm.</i> 151	<i>mm.</i> 131	<i>mm.</i> 30	<i>mm.</i> 23.8	<i>mm.</i> 17.3
181514.....	do.	do.	Dec. 5	do.	306	150	131	30.5	25	17
181516.....	{ Female? (= Male immature.) }	do.	do.	do.	304	152	133.5	30.5	25.2	17
Average of 3 males.....					304	151	131.8	30.3	24.7	17.1
181512.....	Female.	Solombo Besar Island, Java Sea. ³	Dec. 4	Dr. W. L. Ab- bott.	296	147.5	130	29	22	16.5
181515.....	do.	do.	Dec. 6	do.	292	149.5	126.5	28	24	16.5
Average of 2 females.....					294	148.5	128.3	28.5	23	16.5

Family ARTAMIDAE.

ARTAMUS LEUCORYN AMYDRUS, new subspecies.

Subspecific characters.—Much like *Artamus leucoryn leucoryn*,⁴ but paler on upper parts and jugulum.

Description.—Type, adult male, No. 181532, U.S.N.M.; Solombo Besar Island, Java Sea, December 4, 1907; Dr. W. L. Abbott. Pileum and anterior hind-neck dark quaker drab; upper tail-coverts creamy white; remainder of upper surface dark grayish brown, the middle of the back dusky drab; wings and tail sooty black, the outer webs of the secondaries mostly glaucous slate gray, the inner margins of all the wing-quills more or less brownish, and some of the rectrices with very narrow pale brownish tips; lores and a narrow ill-

¹ *Dicruopsis* Salvadori, Proc. Zool. Soc. Lond., 1878, p. 88 (type by monotypy, *Dicrurus megalornis* Gray).

² Measured in the flesh by the collector.

³ Type.

⁴ *Lanius leucoryn*. Linnaeus, Mantissa Plantarum, 1771, p. 521 (Mailla, Luzon I., Philippine Islands). While the original spelling of the specific name here given is evidently an abbreviation, it is practically impossible to determine how Linnaeus would have spelled the remaining portion of the word. In view of at least four such possibilities, it seems much better to use the specific term as he left it, and write now *Artamus leucoryn* (Linnaeus).

defined capistrum, black; sides of head dark quaker drab, somewhat blackish anteriorly; sides of neck dark grayish brown; throat and jugulum dark quaker drab; rest of under parts creamy white, sharply defined transversely against the gray of throat; edge of wing underneath sooty black, flecked with white; remainder of wing-lining creamy white.

The characters of this race have already been indicated by Mr. Stresemann,¹ but no name provided. The birds from Solombo Besar and those also in the United States National Museum from other localities bear out these differences, and indicate that the form is worthy of nomenclatural recognition. It may be distinguished from *Artamus leucorhynchus celebensis* by its smaller size and somewhat darker upper and lower parts. In addition to Solombo Besar, it inhabits the islands of Bali, Java, Banka, and Sumatra, with doubtless others adjacent.

Two specimens are in the present collection. Both exhibit indications of molt among the contour feathers, and one (No. 181533, U.S.N.M., December 3, 1907—not the type) is molting also some of the wing-quills. Measurements of both are as follows:

Measurements of specimens of Artamus leucorhynchus amydrus.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ²	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe with- out claw.
181533.....	Male..	Solombo Besar Island, Java Sea.	1907. Dec. 3	Dr. W. L. Ab- bott.	mm. 188	mm. 132	mm. 59	mm. 20	mm. 17.3	mm. 15
181532.....	do...	do. ³	Dec. 4	do.....	194	133	61	20	17	14.8
Average of 2 males.....					191	132.5	60	20	17.2	14.9

Family ORIOLIDAE.

ORIOLUS MACULATUS LAMPROCHRYSEUS, new subspecies.

Subspecific characters.—Similar to *Oriolus maculatus maculatus*, from Java, but larger; upper parts brighter, more golden (less greenish) yellow; yellow tips on inner webs of inner secondaries and tertials narrower; these tips and the edgings of secondaries and tertials of a duller yellow; yellow wing speculum averaging smaller.

Description.—Type, adult male, No. 181523, U.S.N.M.; Solombo Besar Island, Java Sea, December 4, 1907; Dr. W. L. Abbott. Lores, superciliary, subocular, and broad postocular streaks continuous with a broad occipital band, black; rest of upper parts, including crown, forehead, scapulars, and upper tail-coverts, together with

¹ Novit. Zool., vol. 20, June 17, 1913, p. 291.

² Measured in the flesh by the collector.

³ Type.

entire lower surface, yellow, between lemon chrome and light cadmium, the throat almost pure lemon chrome; tail black, basally edged on inner webs of the rectrices with lemon chrome, this color at the base occupying practically all of the web; the two middle rectrices with a narrow tip of lemon chrome, and each succeeding pair with an increasingly broad terminal band of the same color, this band measuring on the outermost pair about 45 mm. in width; wings black, the inner margins of the quills somewhat brownish; all the primaries excepting the outermost narrowly margined exteriorly with grayish white, this decreasing in length inwardly, the inner feathers tipped with buffy white; secondaries rather broadly edged on terminal portion of outer webs with wax yellow, the tertials broadly margined on same part of outer vanes and narrowly tipped on inner vanes with the same color; lesser and median wing-coverts deep yellow like the back; greater coverts, edge of wing, lining of wing, together with broad tips of the black primary coverts, lemon chrome; "iris deep red, feet leaden."

This new subspecies differs from *Oriolus maculatus richmondi* Oberholser¹ of the Pagi Islands, western Sumatra, in more golden yellow upper and lower parts, more brightly yellow spots on tertials and secondaries, and usually larger yellow wing-speculum.

Three specimens are in the collection, all adults in good plumage, though showing among the contour feathers slight indication of molt. The feet of one of the males, No. 181521, U.S.N.M., are described on the label as "leaden blue"; the bill of the same specimen as "pale purplish fleshy." Measurements are given below:

Measurements of specimens of Oriolus maculatus lamprochryseus.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ²	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe with- out claw.
181523.....	Male..	Solombo Besar Island, Java Sea. ³	1907. Dec. 4	Dr. W. L. Ab- bott.	mm. 281	mm. 150.5	mm. 101	mm. 32.5	mm. 27.8	mm. 21
181521.....	do.	do.	do.	do.	293	151	104.5	33.8	27.5	20
Average of 2 males.....					287	150.8	102.8	33.2	27.7	20.5
181522.....	Female	Solombo Besar Island, Java Sea.	Dec. 5	Dr. W. L. Ab- bott.	281	150	104	32	27	21

¹ *Oriolus maculatus richmondi* Oberholser, Smithsonian Misc. Coll., vol. 60, No. 7, Oct. 26, 1912, p. 16 (North Pagi Island, western coast of Sumatra). It may be worth while to mention here that through some inadvertence the original diagnosis of this form is not entirely correct, as printed, and therefore somewhat misleading. The proper characterization is as follows: Similar to *Oriolus maculatus maculatus*, from Java, but larger; yellow of upper and lower parts deeper and more tinged with orange; yellow tips on tertials and inner secondaries darker and duller, those on tertials larger on outer webs, but narrower, often practically absent on inner webs, and yellow wing speculum smaller.

² Measured in the flesh by the collector.

³ Type.

Family ZOSTEROPIDAE.

ZOSTEROPS SOLOMBENSIS, new species.

Specific characters.—Similar to *Zosterops flava*, from Java, but much larger; upper parts much more greenish and more uniform, the forehead and rump being barely more yellowish than the back; yellow of lower parts duller, lighter, more greenish; sides and flanks strongly washed with olive green; lores and line under eye blackish.

Description.—Type, adult male, No. 181588, U.S.N.M.; Solombo Besar Island, Java Sea, December 5, 1907; Dr. W. L. Abbott. Upper surface warbler green, the pileum more yellowish; upper tail-coverts lighter, between pyrite yellow and warbler green; tail chaetura drab, the feathers margined basally on external webs with warbler green; wings chaetura drab, the inner margins of the remiges, except at tips, paler, almost whitish, the tertials hair brown, washed with warbler green; superior wing-coverts and outer margins of outer vanes of wing-quills, warbler green; broad orbital ring white; a small spot under the anterior part of the eye and continuous with the lores, black; supraloral stripe lemon chrome; remainder of sides of head and neck between pyrite yellow and warbler green, and passing superiorly into the green of the upper parts, inferiorly into the yellow of the lower surface; lower parts medially rather dull lemon chrome; sides of breast and body, together with the flanks, between pyrite yellow and warbler green; lining of wing naphthalene yellow. Wing, 58 mm.; tail, 41.5; exposed culmen, 9;¹ tarsus, 18; middle toe without claw, 10.7.

The sole specimen secured by Doctor Abbott is an adult in perfect plumage, and differs so much from the other described forms of the genus that it seems to represent a new species. It may be distinguished from *Zosterops richmondi* McGregor, from Cagayan-cillo Island, in the Philippine Archipelago, by its darker, more greenish (less yellowish) upper parts, the forehead not yellow; darker wing-quills and rectrices; duller, paler, and narrower yellow supraloral stripe; rather more golden yellow lower surface, and darker, more olive-washed sides and flanks.

II. ARENDS ISLAND.

Arends Island lies in the eastern part of the Java Sea, about 50 miles south of Cape Salatan, southeastern Borneo, and some 35 miles north of the island of Solombo Besar.

Doctor Abbott stopped here on November 23 and 24, 1908, and collected for the United States National Museum eight specimens of birds, representing three species. Since there is apparently no published account of any birds from Arends Island, and since all three of the species obtained by Doctor Abbott are of more than passing interest, it seems worth while to place them on record.

¹ Tip slightly broken.

Family MEGAPODIIDAE.

MEGAPODIUS DUPERRYI GOULDII Gray.

Megapodius gouldii GRAY, Proc. Zool. Soc. Lond., 1861 (meeting of June 25), p. 290 (Lombok Island, East Indies).

One adult female is in the collection. This was taken on November 24, 1908. "Feet brick red; toes blackish; soles orange." Total length (in flesh),¹ 398 mm.; wing, 212; tail, 84; exposed culmen, 21.5; tarsus, 64; middle toe without claw, 38.5.

The present example differs from *Megapodius duperryi duperryi* of New Guinea in its smaller size, paler upper and lower parts, and is apparently identical with *Megapodius duperryi gouldii* of the Lesser Sunda Islands, though we have no specimens of the latter for actual comparison. This Arends Island bird, together with Doctor Abbott's other record from Solombo Besar Island,² extend for some distance westward the known range of the species.

The following four forms of *Megapodius duperryi* are now recognizable, and further investigations may increase this number:

Megapodius duperryi duperryi Lesson and Garnot.—New Guinea.

Megapodius duperryi gouldii Gray.—Lesser Sunda Islands, south to Lombok and Flores; east to the Aru and Kei Islands; north to the Banda Islands and Arends Island; and west to Arends Island, Solombo Besar Island, and the Kangean Islands.

Megapodius duperryi tumulus Gould.—Northern territory of Australia.

Megapodius duperryi assimilis Masters.—Northern Queensland.

Family TRERONIDAE.

MUSCADIVORES ROSACEUS ZAMYDRUS Oberholser.

Muscadivores rosaceus zamydrus OBERHOLSER, Proc. U. S. Nat. Mus., vol. 54, 1917, p. 179 (Solombo Besar Island, Java Sea).

Six specimens appear to be indistinguishable from the series from Solombo Besar Island already described under the above name.² Two of the six (No. 181676, U.S.N.M., November 23, 1908, and No. 181680, November 24, 1908) are molting both wing-quills and rectrices. Measurements of all are given in the following table:

¹ Measured by the collector.

² See p. 179.

Measurements of specimens of *Muscadivores rosaceus zamydrus*.

U.S.N.M. No.	Sex.	Locality.	Date.	Collector.	Total length. ¹		Tail.	Exposed culmen.		Tarsus.	Middle toe without claw.
					mm.	mm.		mm.	mm.		
181676.....	Male....	Arends Island, Java Sea.	1908 Nov. 23	Dr. W. L. Abbott.	410	227	140	21	30	3	
181679.....	do.....	do.....	Nov. 24	do.....	417	241	153.5	20.5	33	36	
181680.....	do.....	do.....	do.....	do.....	430	232	151.5	22	32.5	36.5	
181678.....	do.....	do.....	do.....	do.....	427	232	153	23	33.5	36.5	
Average of 4 males.....					421	233	149.5	21.6	32.3	36.0	
181677.....	Female..	Arends Island, Java Sea.	Nov. 23	Dr. W. L. Abbott.	400	207	140	20.5	31	34.5	
181681.....	do.....	do.....	Nov. 24	do.....	400	238	152	22	33.5	36.5	
Average of 2 females.....					400	222.5	146	21.3	32.3	35.5	

¹ Measured in the flesh by the collector.

Family ORIOLIDAE.

ORIOIUS MACULATUS LAMPROCHRYSEUS Oberholser.

Oriolus maculatus lamprochryseus OBERHOLSER, Proc. U. S. Nat. Mus., vol. 54, 1917, p. 186 (Solombo Besar Island, Java Sea).

One specimen, No. 181700, U.S.N.M., was obtained by Doctor Abbott on November 24, 1908. It is a male in juvenal plumage, and is apparently not distinguishable from the bird of Solombo Besar Island, already described by the writer as *Oriolus maculatus lamprochryseus*.² It measures: total length (in flesh),³ 277 mm.; wing, 145.5; tail, 98.5; exposed culmen, 32; tarsus, 28; middle toe without claw, 20.5.

III. PULO MATA SIRI.

Pulo Mata Siri is the largest of the Laurot, or Laut Kitchil, Islands. It is situated in the middle of this group, some 75 miles south of the southeastern corner of Borneo, 225 miles north-northeast of the eastern end of Java, and about 250 miles west of southeastern Celebes. It is about 7½ miles in length from northeast to southwest, and approximately 1½ miles in width. Its surface is rocky, rough, and hilly, culminating in a high ridge which traverses its length, and at the highest point reaches an altitude of 1,400 feet. The rocks are chiefly granite, and there is but little coral reef along the coast.

This island is uninhabited, and is entirely covered with dense forest or jungle. The commonest mammals are rats, squirrels, bats, and muntjacs. Birds, at the time of Doctor Abbott's explorations, seemed not to be numerous.

² See p. 186.³ Measured by the collector.

Doctor Abbott paid two visits to Pulo Mata Siri: the first from December 7 to 12, 1907; the second from November 25 to December 1, 1908. On these occasions he collected 13 specimens of birds of 8 species, 5 of these representing new subspecies hereinafter described. These specimens, which Doctor Abbott has presented to the United States National Museum, and a single other species reported but not secured, constitute, up to the present time, the only ornithological records from the island of Mata Siri. Other birds, of course, remain to be detected here, but the avifauna is probably not large.

If these few birds are a criterion, Pulo Mata Siri is, as would be expected, faunally most closely allied to Borneo, but possessed, nevertheless, of a decided Javan and Celebesian infusion.

Family ARDEIDAE.

NANNOCNUS EURHYTHMUS (Swinhoe).

Ardetta eurhythmia SWINHOE, Ibis, ser. 3, vol. 3, No. 9, January, 1873, p. 74, pl. 2 (Amoy, China) (wrongly spelled *Ardetta eurhythmia* on the plate).

One specimen, an immature female, No. 181399, U.S.N.M., taken, December 9, 1907; "iris yellow; bill dark brown above, pale greenish yellow beneath; feet pale green." Length (in flesh), 372 mm.

This apparently is the southernmost record for the species.

The specific name of this species has been consistently misspelled by authors. It is correct as above written.

Family MEGAPODIIDAE.

MEGAPODIUS DUPERRYI GOULDII Gray.

Megapodius gouldii GRAY, Proc. Zool. Soc. Lond., 1861 (meeting of June 25), p. 290 (Lombok Island, East Indies).

Megapodes were reported to Doctor Abbott, but no specimens were obtained by him.

Family TRERONIDAE.

HAEMATAENA MELANOCEPHALA MASSOPTERA, new subspecies.

Subspecific characters.—Similar to *Haemataena melanocephala melanocephala*, from Java, but much larger; gray of head and neck somewhat paler; yellow of throat with slightly more of a chrome tinge.

Description.—Type, adult male, No. 181420, U.S.N.M.; Pulo Mata Siri, Java Sea, December 8, 1907; Dr. W. L. Abbott. Head and throat all around pale gull gray, with a large black patch, about 22 mm. long by 15–17 mm. wide, on occiput, and with the chin and middle of upper throat chrome yellow; hind neck and sides of neck warbler green, shading toward olive green on the upper back and scapulars; lower back, rump, and upper tail-coverts mixed olive green, warbler green, and dark green; tail-feathers basally, and,

excepting the middle pair, also on marginal portion of inner webs, fuscous, the remaining portions of the feathers somewhat metallic cerro green, in places tinged with dark green or with bronzy, and having on the two middle rectrices numerous narrow almost invisible bronzy bars; wings fuscous, the superior coverts and the exposed portions of the quills in the closed wing somewhat metallic olive green, cerro green, bronzy green, and dark green, all mingled together, the general effect being near olive green; jugulum and breast between cerro green and spinach green, and shading to between parrot green and grass green on abdomen, sides, and thighs; crissum, including anal region, chrome yellow to cadmium yellow, the longest lower tail-coverts mostly red, between carmine and acajou red; lining of wing neutral gray, the feathers edged and tinged with cerro green and olive yellowish; "iris yellow; eyelids greenish yellow; bill pale yellow-green; feet deep red." Total length (in flesh), 266 mm.; wing, 127; tail, 81; exposed culmen, 15; tarsus, 23.5; middle toe without claw, 24.

This new race is much larger than *Haemataena*¹ *melanocephala melanospila* of Celebes, and has the gray of head and neck paler, also the yellow of throat and crissum lighter and less orange-tinged. From *Haemataena melanocephala xanthorrhoea* of the Sanghi Islands, it differs in the darker gray of head and neck, darker yellow of throat, and lighter, less orange-shaded yellow of posterior lower parts. Compared with *Haemataena melanocephala bangueyensis*, from the Philippine Islands, it is much larger, with gray of head and neck paler, and yellow of throat deeper. The type is the only specimen obtained by Doctor Abbott.

The genus *Haemataena* Bonaparte¹ (type, *Columba melanocephala* Forster) is sufficiently different from *Ptilinopus* Swainson to make necessary its recognition in nomenclature. The long tail, unbifurcated pectoral feathers, and relatively broad terminal portion of the first primary are distinctive. Ft. equals *Spilotreron* Salvadori.

The forms referable to this genus are apparently all subspecies of *Haemataena melanocephala*, and are as follows:

Haemataena melanocephala melanocephala (Forster).

Haemataena melanocephala melanospila (Salvadori).

Haemataena melanocephala massoptera Oberholser.

Haemataena melanocephala xanthorrhoea (Salvadori).

Haemataena melanocephala bangueyensis (Meyer).

Haemataena melanocephala pelingensis (Hartert).

Haemataena melanocephala chrysorrhoea (Salvadori).

BUTRERON CAPELLEI PASSORHINA, new subspecies.

Subspecific characters.—Similar to *Butreron capellei capellei*, from Java, but bill more robust.

¹ For this generic name, see Richmond, Proc. U. S. Nat. Mus., vol. 53, 1917, p. 593.

Description.—Type, adult male, No. 181430, U.S.N.M.; Pulo Mata Siri, Java Sea, December 10, 1907; Dr. W. L. Abbott. Forehead pale olive gray, the anterior portion palest; crown greenish gray, between gnaphalium green and hathi gray; hind neck vetiver green; upper back and scapulars darker, between vetiver green and andover green; lower back storm gray, slightly washed with the green color of the interscapular region; rump green like the upper back, but anteriorly shading insensibly into the gray of the lower back, and posteriorly into the dull mignonette green of the longest upper tail-coverts; broad tips of middle pair of rectrices between light yellowish olive and mignonette green, the remaining exposed portion of the same color but somewhat darker, and the basal concealed part deep gull gray, more or less washed with the same green; remaining rectrices dusky neutral gray, basally deep gull gray on the outer vanes, light neutral gray on the inner, and terminally, for some 23 mm., pale neutral gray, the two pairs next the middle pair washed with the green of the middle feathers, particularly on the outer webs, the outer rectrices also very slightly and narrowly tinged with the same on the outer margins of their gray tips; wings slate color, but the outer webs of tertials and most of the lesser wing-coverts (excepting only those along the bend of the wing) together with a few of the inner median coverts, between andover green and vetiver green like the scapulars; narrow edgings on the outer webs of the inner median coverts and some of the inner greater coverts, lemon yellow; and similar but much broader edgings on the two innermost greater coverts and on the outermost tertial and innermost secondary, lemon chrome; lores pale greenish olive gray; superciliary region, a narrow orbital ring, and the anterior malar region, greenish gray like the crown; remaining parts of the sides of the head, together with the sides of the neck, vetiver green, rather brighter on the subauricular region; anterior part of chin between yellowish glaucous and seafoam yellow; posterior portion of chin and medial uppermost part of throat between citron green and water green; middle of rest of throat lime green; these colors of chin and throat pass insensibly into each other and into those of sides of head and neck; a broad (27 mm.) band on jugulum yellow ocher, shading laterally to buckthorn brown; breast light lime green; sides of body and upper abdomen between tea green and water green; flanks and lower abdomen between slate olive and sage green; shorter lower tail-coverts of the same green color, but mixed with feathers of cartridge buff and pinkish buff, and some of the green feathers broadly tipped with the same buff; rest of lower tail-coverts Hay's brown; thighs partly dull green like the lower abdomen, partly cartridge buff; lining of wing partly slate gray, partly dark gull gray.

The five birds, all adult, obtained by Doctor Abbott are in good plumage, and show only slight individual variation. There seems to be no difference in size between male and female. Two of the females, No. 181426 U.S.N.M., December 12, 1907, and No. 181427 U.S.N.M., December 10, 1907, are each molting one or two of the wing-quills. The colors of unfeathered parts, taken from the fresh birds, and given as the same on the labels of both sexes, are as follows: "Eyelids and feet yellow; iris dark brown; bill greenish jade color, base and cere green." Measurements of all the specimens are added below.

Measurements of specimens of Buteron capellei passorhina.

U.S.N.M. number.	Sex.	Locality.	Date.	Collector.	Total length. ¹	Wing.	Tail.	Exposed culmen.	Height of bill at base.	Tarsus.	Middle toe without claw.
181430..	Male.....	Pulo Mata Siri, Java Sea. ²	1907. Dec. 10	Dr. W. L. Abbott.	mm. 387	mm. 202	mm. 127	mm. 23	mm. 11.5	mm. 30.5	mm. 28.5
181429..	do.....	do.....	Dec. 12	do.....	375	194	116	24	10.5	31	28.5
Average of 2 males.....					381	198	121.5	23.5	11	30.8	28.5
181428..	Female..	Pulo Mata Siri, Java Sea.	Dec. 8	Dr. W. L. Abbott.	378	208	122	23	11	32	30.5
181427..	do.....	do.....	Dec. 10	do.....	373	203	118	24	11.5	26.5	30
181426..	do.....	do.....	Dec. 12	do.....	368	195	124	23	10	28	28.5
Average of 3 females.....					373	202	121.3	23.3	10.8	28.8	29.7

¹ Measured in the flesh by the collector.

² Type.

Family ALCEDINIDAE.

SAUROPATIS CHLORIS CYANESCENS Oberholser.

Sauropatis chloris cyanescens OBERHOLSER, Proc. U. S. Nat. Mus., vol. 52, February 8, 1917, p. 189 (Pula Taya, off the southeastern coast of Sumatra).

One immature female, No. 181491, U.S.N.M., taken, December 12, 1907.

This is nearly adult, but still has the dull-colored upper surface and dusky scale-like markings on the lower surface. It is molting both remiges and contour feathers. It is subspecifically the same as the birds from Bawean Island. Its measurements are: Total length (in flesh ³), 258 mm.; wing, 112; tail, 70; exposed culmen, 46; tarsus, 15.5.

Family PYCNONOTIDAE.

PYCNONOTUS BRUNNEUS ZAPHAEUS, new subspecies.

Subspecific characters.—Similar to *Pycnonotus brunneus brunneus* ⁴ from the Malay Peninsula, and of about the same size, but upper sur-

³ Measured by the collector.

⁴ For this use of *Pycnonotus brunneus* Blyth, see Oberholser, Bull. U. S. Nat. Mus., No. 98, June 30, 1917, pp. 44-45.

face darker and more brownish or rufescent (less olivaceous or grayish); lower parts brighter, more yellowish, not so uniformly dull brownish or ochraceous.

Description.—Type, adult male, No. 181543, U.S.N.M.; Pulo Mata Siri, Laurot Islands, Java Sea, December 11, 1907; Dr. W. L. Abbott. Upper parts brownish olive, becoming more rufescent on rump, and shading into dark dresden brown on upper tail-coverts; the feathers of pileum edged with paler, which imparts a somewhat scaly effect; tail between mummy brown and brownish olive, paler on tips and inner margins of feathers, and edged on outer webs with brownish olive; wings fuscous, all the quills and superior coverts margined with brownish olive or light brownish olive; sides of head, neck, and breast brownish olive; cheeks and sides of throat light brownish olive; chin and upper throat buff, between deep olive buff and deep colonial buff; jugulum and upper breast dull isabella color, somewhat mixed with cream buff; abdomen dull marguerite yellow; lower breast the same, but washed with isabella color; sides, flanks, and thighs, light brownish olive; crissum and lining of wing chamois, a little mixed with fuscous; "iris red." Total length (in flesh ¹), 194 mm.; wing, 84; tail, 75.5; exposed culmen, 13.5; height of bill at base, 6.0; tarsus, 20; middle toe without claw, 13.5.

The single specimen of this new race that Doctor Abbott obtained on Pulo Mata Siri is identical with a good series of the same species from Borneo; and the birds from both these islands together differ, as above set forth, noticeably in color from examples taken on the Malay Peninsula and its islands, though apparently not in size. From *Pycnonotus brunneus zapolius* Oberholser,² of the Anamba Islands, *Pycnonotus brunneus zaphaeus* may readily be distinguished by its more rufescent or brownish (less greenish) upper surface, and darker, more brownish and ochraceous (less grayish and yellowish) lower parts.

The geographic distribution of *Pycnonotus brunneus zaphaeus*, so far as known, is confined to Pulo Mata Siri and Borneo. Thus *Pycnonotus brunneus brunneus* becomes restricted to the Malay Peninsula and its islands and to southern Tenasserim.

Family TIMALIIDAE.

MALACOCINCLA ABBOTTI SIRENSIS, new subspecies.

Subspecific characters.—Similar to *Malacocincla abbotti olivacea* (Strickland), from the southern part of the Malay Peninsula, but upper surface decidedly darker; lower parts duller, the sides of neck, sides of breast, and sides of body less ochraceous (more grayish); and jugulum pale vinaceous buff instead of ochraceous buff.

¹ Measured by the collector.

² Bull. U. S. Nat. Mus., No. 98, June 30, 1917, p. 45 (Pulo Siantan, Anamba Islands).

Description.—Type, adult male, No. 181561, U.S.N.M.; Pulo Mata Siri, Java Sea, December 11, 1907; Dr. W. L. Abbott. Upper parts dark brown, between dresden brown and mummy brown, somewhat darker on the pileum, and inclining to cinnamon brown on the rump, the feathers of the forehead with broad buffy central areas, those of the fore part of crown with narrow shaft lines of the same color; upper tail-coverts reddish brown, between argus brown and Sanford's brown; tail basally of the same color, though somewhat darker, and terminally shading toward Prout's brown; primaries and secondaries dusky sepia, the outer webs of secondaries, with all of the tertials and superior wing-coverts, Prout's brown, and the outer webs of the primaries between cinnamon brown and dresden brown; sides of head brown like the back, but the lores mixed with pale grayish from the basal portion of the feathers, the superciliary region also slightly grayish and with narrow shaft lines of grayish or buffy white; auriculars like the back but somewhat lightened by rather broad buff shaft markings; sides of neck Saccardo's umber, shading inferiorly toward tawny olive; chin white; throat grayish white; jugulum vinaceous buff, slightly washed laterally with brownish; breast tilleul buff; abdomen dull pinkish buff; lower tail-coverts between ochraceous tawny and zinc orange; sides of breast and jugulum between tawny olive and Saccardo's umber; sides tawny olive; flanks clay color; thighs between wood brown and tawny olive; inner under wing-coverts between cinnamon buff and pinkish buff; the outer rows tilleul buff; inner margins of outer secondaries and inner primaries avellaneous. Total length (in flesh¹), 160 mm.; wing, 73.5; tail, 47; exposed culmen, 17.5; tarsus, 28; middle toe without claw, 16.2.

This new subspecies is more rufescent on the upper parts and on sides of neck than *Malacocincla abbotti büttikoferi* from Borneo; also more extensively and brightly tinged with ochraceous and ochraceous buff below. It thus really more closely resembles *Malacocincla abbotti olivacea* from the Malay Peninsula. The Bornean bird, *Malacocincla abbotti büttikoferi*,² while it seems to be but subspecifically different from the Malay Peninsula race, *Malacocincla abbotti olivacea*, is yet a recognizable form, differing in less rufescent upper surface, and less extensively and brightly ochraceous under parts. The type of *Malacocincla abbotti sirensis* is the only specimen obtained by Doctor Abbott.

The present species, *Malacocincla abbotti* Blyth, is clearly so different structurally from *Turdinus macrodactylus*, the type of the genus *Turdinus*, that its generic separation is apparently necessary. The

¹ Measured by the collector.

² *Malacocincla büttikoferi* Finsch, Notes Leyden Mus., vol. 22, March, 1901, p. 218 (Borneo).

former has a tarsus that appears almost booted, so slight are usually the indications of scutellae, while in *Turdinus macrodactylus* the scutellations are very distinct. Also the tarsi are weaker; the feathers of throat not stiff and scale-like; and the lower tail-coverts reach much more than halfway to the ends of the rectrices, instead of much less than halfway in *Turdinus*. The name *Malacocincla* Blyth (type, *Malacocincla abbotti* Blyth)¹ is the proper generic term for this species and its allies.

The subspecies of *Malacocincla abbotti* now number five, the ranges of which are as follows:

Malacocincla abbotti abbotti Blyth.—Nepal and Assam to Tenasserim.

Malacocincla abbotti olivacea (Strickland).—Malay Peninsula.

Malacocincla abbotti büttikoferi Finsch.—Borneo.

Malacocincla abbotti baweana Oberholser.²—Bawean Island, Java Sea.

Malacocincla abbotti sirensis Oberholser.—Pulo Mata Siri, Java Sea.

Family TURDIDAE.

KITTACINCLA MELANURA NIGRICAUDA Vorderman.

Cittocincla nigricauda VORDERMAN, Natuurk. Tijdsch. Nederl.-Indie, vol. 52, 1893, p. 197 (Kangean Island, Java Sea).

A single immature male of this species, taken on November 26, 1908, is referred to this form from the Kangean Islands. We have no specimens from these islands, however, and the present bird may well not be identical; but from the published description of *Kittacincla nigricauda* it is not with certainty distinguishable. It is just molting from the juvenal plumage into that of the adult, and with wings, upper surface, throat, and breast still showing evidences of immaturity. From specimens of *Kittacincla melanura opisthochroa* Oberholser,³ from Lasia Island, off the western coast of Sumatra, this Pulo Mata Siri bird differs in much larger size and much paler posterior lower parts.

The measurements of this specimen (No. 181704, U.S.N.M.) are as follows: Total length (in flesh⁴), 228 mm.; wing, 99⁵; tail, 106⁵; exposed culmen, 18; tarsus, 27; middle toe without claw, 19.

If this bird is really identical with *Kittacincla nigricauda* Vorderman, the latter is certainly but a subspecies of *Kittacincla melanura*.

¹ *Malacocincla* Blyth, Journ. Asiatic Soc. Bengal, vol. 14, pt. 2, No. 164, for August, 1864, p. 600 (type, by monotypy, *Malacocincla abbotti* Blyth).

² Proc. U. S. Nat. Mus., vol. 52, February 8, 1917, p. 194 (Bawean Island, Java Sea).

³ Smithsonian Misc. Coll., vol. 60, No. 7, October 26, 1912, p. 13 (Pulo Lasia).

⁴ Measured by the collector.

⁵ Not fully grown.

Family DICRURIDAE.

DICRUOPSIS PECTORALIS SIRENSIS, new subspecies.

Subspecific characters.—Resembling *Dicruopsis*¹ *pectoralis solombensis* Oberholser,² from Solombo Besar Island, but larger; frontal hairs shorter or absent; black of upper parts deeper, richer, more velvety, and more bluish (less brownish or greenish); hackles on sides of neck more bluish or purplish (less greenish); metallic spots on throat and breast more bluish (less greenish); posterior lower surface of a deeper and more velvety (less brownish) black, with more bluish (less greenish) sheen.

Description.—Type, adult female, No. 181510, U.S.N.M.; Pulo Mata Siri, Java Sea, December 8, 1907; Dr. W. L. Abbott. Upper parts velvety black, with a slight violet or bluish sheen, but pileum and a few pointed feathers on cervix, shining metallic bluish black, and the upper tail-coverts shining metallic dull blackish green; tail black, the external webs of rectrices more or less margined with shining metallic dull blackish green; wings black, becoming slightly brownish on tips of primaries and on inner margins of all the quills; the exposed portions of all the superior wing-coverts, the tertials, outer webs of secondaries, and outer webs of primaries, excepting distal portions, shining metallic dull blackish green; sides of head and neck velvety black with a slight violet sheen, the long pointed feathers on the sides of the neck shining metallic dark delft blue; lower parts velvety black with a slight violet or bluish sheen, the feathers of lower throat, jugulum, and upper breast with short lanceolate tips of shining metallic dusky dull bluish green, giving to these parts a spotted appearance; lining of wing black, with a bluish or bluish green sheen; "iris straw yellow."

From *Dicruopsis pectoralis leucops*, which this new race resembles more than it does *Dicruopsis pectoralis solombensis* Oberholser,² from Solombo Besar Island, it is separable by its rather duller upper surface, longer hackles on sides of neck, and duller, more brownish posterior lower parts. The two specimens in the collection are both adults in good plumage. Their measurements follow.

¹ For the use of this generic name, see p. 185

² See p. 184.

Measurements of specimens of Dicruropsis pectoralis sirensis.

U. S. N. M. No.	Sex.	Locality.	Date.	Collector.	Total length.	Wing.	Tail.	Exposed culmen.	Tarsus.	Middle toe without claw.
181510.....	Female..	Pulo Mata Siri, Laurot Islands, Java Sea. ²	1907. Dec. 8	Dr. W. L. Abbott.	mm. 305	mm. 157	mm. 127	mm. 31.0	mm. 26	mm. 17.8
181511.....	do.....	do.....	Dec. 12	do.....	308	158	134	30.8	25.5	18.5
Average of 2 females.....					306.5	157.5	130.5	30.9	25.8	18.2

¹ Measured in the flesh by the collector.

² Type.

IV. PULO KALAMBAU.

Pulo Kalambau is one of the largest three islands of the Laurot, or Laut Kitchil, Islands, in the eastern portion of the Java Sea. It lies in the southern part of this group, and about 90 miles south of the eastern end of southern Borneo.

Doctor Abbott landed here for a day on December 7, 1907, and collected two birds, which he as usual presented to the United States National Museum. These represent two species, and one is an undescribed subspecies. So far as we are aware no birds have ever been recorded from Pulo Kalambau. Those collected by Doctor Abbott are given below.

Family RALLIDAE.

GALLICREX CINEREA (Gmelin).

[*Fulica*] *cinerea* GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 702 (China).

Doctor Abbott obtained a single specimen, an adult female, No. 181400, U.S.N.M., December 7, 1907. Length (in flesh), 350 mm.

This example is in perfect plumage, but appears to exhibit no significant differences in either size or color from Chinese or Philippine birds, though it is somewhat smaller than any of our limited series of specimens from the Philippine Islands.

Family ZOSTEROPIDAE.

ZOSTEROPS SOLOMBENSIS ZACHLORA, new subspecies.

Subspecific characters.—Similar to *Zosterops solombensis solombensis*,³ from Solombo Besar Island, but somewhat larger, particularly the bill; upper tail-coverts, pileum, and cervix, duller, more greenish (less yellowish) olive green; back lighter; and lower surface duller less golden (more greenish) yellow, the flanks and sides paler.

³ See p. 188.

Description.—Type, adult male, No. 181589, U.S.N.M.; Pulo Kalambau, Laurot Islands, Java Sea, December 7, 1907; Dr. W. L. Abbott. Upper surface warbler green, the upper tail-coverts lighter, between warbler green and pyrite yellow; tail chaetura drab, the feathers margined basally on external webs with warbler green; wings chaetura drab, the inner margins of the remiges, except at tips, paler, almost whitish, the tertials hair brown washed with warbler green; superior wing-coverts and outer margins of outer vanes of wing-quills warbler green; broad orbital ring white; a small black spot under the anterior part of the eye and continuous with the black lores; supraloral stripe lemon chrome; remainder of sides of head and neck between warbler green and pyrite yellow, and passing superiorly into the green of the upper parts, inferiorly into the yellow of the lower surface; lower parts medially rather dull yellow, between lemon yellow and wax yellow; flanks, with sides of breast and body, pyrite yellow; lining of wing naphthalene yellow. Total length,¹ 126 mm.; wing, 57.5; tail, 42.5; exposed culmen, 11.5; tarsus, 18.5; middle toe without claw, 10.5.

Although Doctor Abbott obtained but a single specimen, this differs in such a manner from *Zosterops solombensis solombensis* of Solombo Besar Island, that it seems to be without doubt subspecifically distinct. Its upper surface is more uniform, indeed, almost of the same shade throughout, due chiefly to the fact that there is much less contrast between the back and the upper tail-coverts.

¹ Measured in the flesh by the collector.